

AMENDMENT TO THE CLAIMS

1-6. (Canceled)

7. (Currently Amended) An apparatus for connecting portions of a circuit board on an interior of a hollow core roller to at least one external contact, said roller having a first end rotatably supported on a frame, a non-rotating tubular shaft supporting a second end of the roller for rotation relative to the frame and the tubular shaft having an end surface open to an interior of the hollow core roller, a first spring exerting a load in an axial direction on the hollow core roller toward the first end of the hollow core roller, a circuit board supported on the interior of the hollow core roller adjacent the second end of the hollow core roller, said circuit board having a plane that is generally perpendicular to an axis of rotation of the hollow core roller, a first support axially fixed on the interior of the hollow core roller and spaced inwardly from the circuit board, a second support slidably mounted on the interior of the hollow core roller to ~~the~~an interior side of the circuit board, a second spring engaging the first support and loading the second support toward the circuit board and ~~stationary~~-tubular shaft to engage the circuit board and urge the circuit board to engage the end of the tubular shaft to thereby effect a signal carrying connection between a first contact region of the circuit board and the tubular shaft.

8. (Currently Amended) The apparatus of claim 7, wherein there is a second shaft mounted on the interior of the tubular shaft and slidably mounted for at least limited axial movement relative to the tubular shaft, said second shaft having an end extendable outwardly from the end surface of the tubular shaft, a third spring urging the second shaft in a direction outwardly from the

end surface of the tubular shaft toward the interior of the hollow core roller, and the second support including a pilot shaft having an end supporting the circuit board; the pilot shaft and the second shaft aligning along the axis of rotation of the hollow core roller, such that when the second spring urges the circuit board to engage the end ~~surface—end~~ of the tubular shaft, the second shaft engages the circuit board in a second contact region.

9.(Previously Presented) The apparatus of claim 8, wherein said second support including the pilot shaft comprises a cage that slidably mounts on the interior of the hollow core roller, and the cage having supports spaced outwardly from and engageable with peripheral edges of the circuit board to substantially contain the circuit board in the cage.

10.(Previously Presented) The apparatus of claim 8, wherein the first contact region of the circuit board comprises a ring contact of size to engage the end surface of the tubular shaft.

11.(Currently Amended) The apparatus of claim 8, wherein a central portion of the circuit board has an axial center bore therein, a portion of the pilot shaft entering the center bore to center the circuit board, and the circuit board ~~center—bore~~ having a ~~surrounding—layer~~ of metal surrounding the center bore forming the second contact region spaced from the first contact region, said second contact region being engaged by the second shaft when the circuit board is positioned to engage the end surface of the tubular shaft.

12.(Previously Presented) The apparatus of claim 8, wherein the first spring exerts a first spring load in axial direction toward the first end of the roller and exerts the spring load at a first force greater than a second spring load exerted by the second

spring urging the circuit board toward the tubular shaft, and the third spring exerting a lesser spring force than the second spring load urging the second shaft toward the circuit board.

13.(Original) The apparatus of claim 8, wherein said tubular shaft and said second shaft are insulated from each other, and are made of an electrically conductive material.

14.(Currently Amended) The apparatus of claim 7, wherein the hollow core roller has laminating material wound thereon and is mounted on a frame, a ~~A heated roller and support for use in lamination, comprising a frame, said heated roller being rotatably mounted on said frame, to receive laminating material from the tubular roller for laminating the material on a substrate, a pair of shield members on opposite sides of said heated roller and extending along a longitudinal length thereof, said shield members being spaced apart along one side of the heated roller to leave a slot to which the roller is exposed, the roller having exposed surface portions extending partially through a plane defined by the shield members at the slot, the improvement comprising a drive motor for the heated roller, and a motor control to that continuously rotates the heated roller at a selected rotational speed when the roller is heated to a desired level to reduce cooling of the portion of the roller exposed at the slot.~~

15.(Currently Amended) The heated roller and support apparatus of claim 14, wherein the drive comprises a stepper motor, that steps the heated roller at the selected rotational speed.

16.(Currently Amended) The heated roller and support apparatus of claim 14~~15~~, wherein a heater is mounted to heat the heated roller, a temperature sensor providing a signal indicating the temperature at a surface of said heated roller, a~~the~~ motor control to

starting the stepper motor when the temperature of the surface of the heated roller is above the desired ~~value~~level.

17. (Currently Amended) ~~A laminator assembly comprising~~The apparatus of claim 7 wherein the tubular roller is mounted on a frame and has a laminating film thereon to be laminated onto a disc substrate, ~~a housing~~, a support tray on the frame for supporting a disc for lamination by passing the disc below a film from the tubular roller, a heated roller on the frame, the film ~~being that is~~ pressed against a surface of the disc for lamination, the tray including a center portion and an outer support portion having an upper support surface defining a support plane, the center portion defining a region recessed below the support plane for receiving a disc, and an adjustable hub in the recessed region having at least two positions, wherein in a first position an upper surface of the hub is below the support plane of the tray, and in a second position the upper surface of the hub is substantially coplanar with the support plane.

18. (Currently Amended) The laminator apparatus of claim 17, wherein the tray has a plurality of support pads in the recessed region spaced annularly apart that are at a desired level, the hub having mating support pads that face downwardly toward the support pads of the tray, wherein when the selected support pads on the hub are overlying the support pads on the tray, the hub is in the second position and when the hub is rotated a selected amount different support pads on the hub are overlying the pads on the tray, and the hub is in the first position.

19. (Currently Amended) The laminator apparatus of claim 17, and a disc sensor in the recessed region of the tray, a pair of apertures in the hub, one of said apertures overlying the disc sensor in each of the two positions of the hub.

20.(Currently Amended) The ~~laminator~~—apparatus of claim 19, wherein the hub is made of a magnetic material, and a magnet on the tray to create a magnetic force to attract the hub toward the tray.

21.(Currently Amended) The ~~laminator~~apparatus of claim 18, and a first separate support layer on the tray in portions surrounding the recessed region, and a second separate support layer on the hub.

22.(New) An apparatus for connecting a pair of contacts of a circuit board on an interior of a hollow core roller to a pair of external contacts, said roller being rotatably supported on a frame, a non-rotating tubular shaft at an end of the roller, the tubular shaft having an end surface open to an interior of the hollow core roller, a circuit board supported on the interior of the hollow core roller adjacent the end surface of the tubular shaft, said circuit board having a plane that is generally perpendicular to an axis of rotation of the hollow core roller, a circuit board spring on the interior of the hollow core roller spring loading the circuit board in a direction to urge the circuit board to engage the end surface of the tubular shaft to effect a signal carrying connection between a first contact region of the circuit board and the tubular shaft, a second shaft mounted on the interior of the tubular shaft and slidably mounted for at least limited axial movement relative to the tubular shaft, said second shaft having an end extendable outwardly from the end surface of the tubular shaft, a shaft spring urging the second shaft in a direction outwardly from the end surface of the tubular shaft toward circuit board, a pilot shaft supported in the hollow core roller engaging an axial opening in the circuit board, to center and support the circuit board, the shaft spring urging the

second shaft to a second central contact on the circuit board when the circuit board engages the end surface of the tubular shaft.

23.(New) The apparatus of claim 22, wherein the first contact region of the circuit board comprises a ring contact of size to engage the end surface of the tubular shaft.